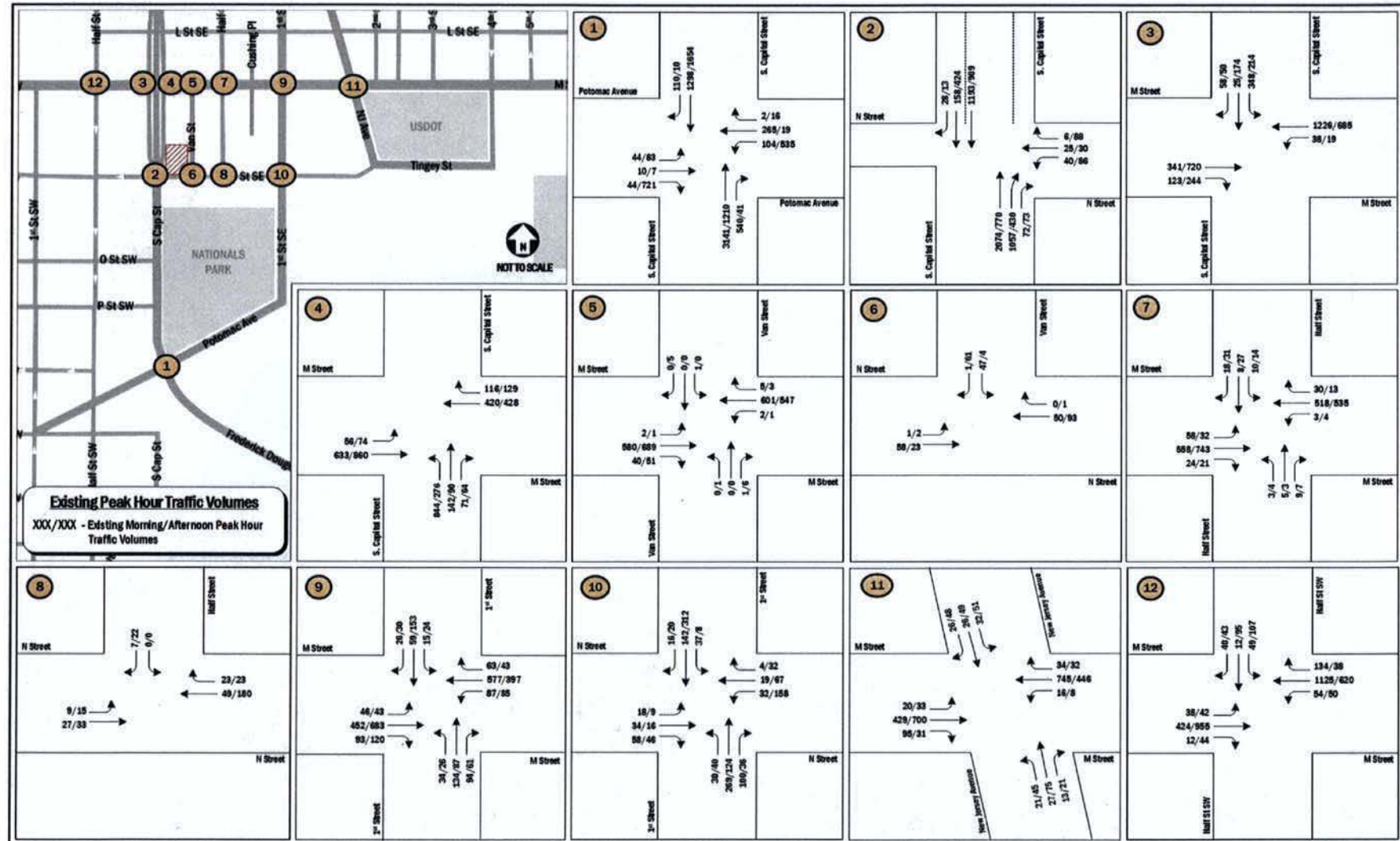




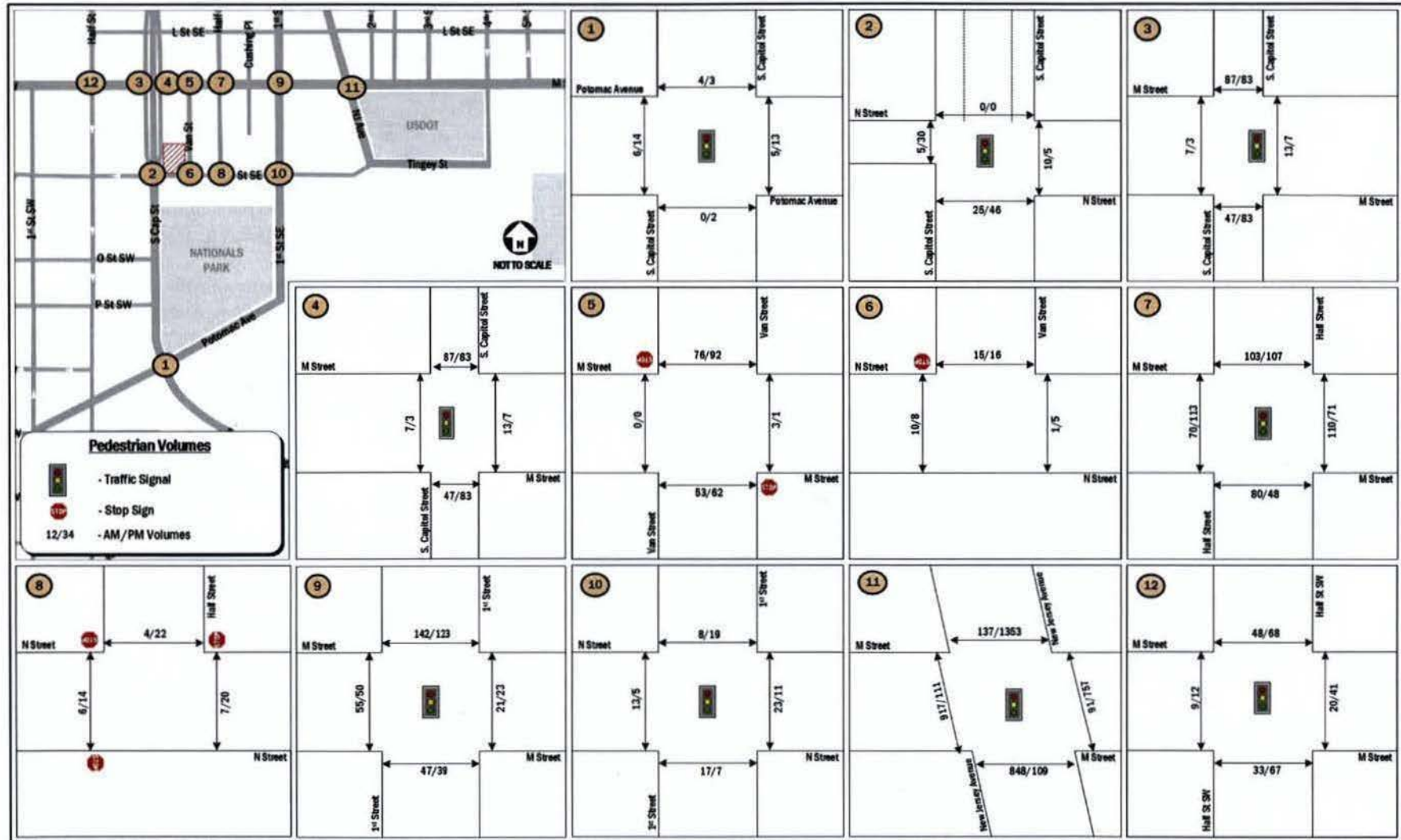


Figure 15: Existing Peak Hour Pedestrian Volumes

Table 14: Summary of Vehicular Analysis Assumptions**Existing Conditions**

- *Dates of data collection:*
 - Wednesday, March 28, 2012
 - Tuesday, November 27, 2012
 - Tuesday, February 12, 2013
 - Thursday, May 15, 2014
 - Counts collected 6:30 – 9:30 AM and 4:00 – 7:00 PM
 - Count sheets included in Technical Attachments
- *Geometries and lane configures based on existing conditions*
- *Signal timings/phasing/offsets provided by DDOT*

Future Conditions without Development (2017 Background)

- *Background developments included those in study area that are approved with anticipated completion by 2017:*
 - Akridge at Half Street (25 M Street, 1201 Half Street, and Half Street Residential)
 - Riverfront on the Anacostia (Phase 1 only)
 - Gallery at Capitol Riverfront
 - Half Street Phase II (Hotel and Residential)
 - Square 701
 - Camden South Capitol
 - Hampton Inn
 - DC Water Occupied Sites (Parcel F1 only)
- *Trip generation, mode split, and trip assignment assumptions for background developments taken from individual studies when available.*
- *If no study was available, mode split assumptions are shown in Table 16 and trip assignment assumptions shown in Figure 16.*
- *Inherent growth:*
 - *Assumed 1% per year compounded annually*
 - *Applied to through volumes along M Street only*
- *No external roadway infrastructure or signal timing improvements assumed, with exception of Cushing Place extension included with construction of background developments*

Future Conditions with Development (2017 Future)

- *Site trip generation and mode split assumptions detail in "Site Transportation Demand" section*
- *Trip distribution for vehicles based on existing traffic volumes and travel patterns*
- *Site access provided from Van Street SE, north of N Street SE*
- *No external roadway infrastructure or signal timing improvements assumed*

Table 15: Review of Background Developments

Development Name	Development Plan	Located in study area?	Approved?	Include in background?
25 M Street – Akridge at Half Street	243,000 square-foot office building with 18,400 square feet of ground-level retail Anticipated completion: 2016	Yes	Yes, the PUD was approved in February 2011 under case number 08-30A	Yes. Trip generation, mode split, and trip assignment assumptions based on the "Square 700 Development Traffic Impact Assessment" performed by Gorove/Slade in January 2009.
1201 Half Street – Akridge at Half Street	115,000 square-foot office building with 9,600 square feet of ground-level retail Anticipated completion: 2015	Yes	Yes, the PUD was approved in February 2011 under case number 08-30A	Yes. Trip generation, mode split, and trip assignment assumptions based on the "Square 700 Development Traffic Impact Assessment" performed by Gorove/Slade in January 2009.
Akridge at Half Street Residential	280-unit residential building with 22,000 square feet of ground-level retail Anticipated completion: 2015	Yes	Yes, the PUD was approved in February 2011 under case number 08-30A	Yes. Trip generation, mode split, and trip assignment assumptions based on the "Square 700 Development Traffic Impact Assessment" performed by Gorove/Slade in January 2009.
Arthur Capper/Carrollsborg and Capitol Quarter, other Parcels (including 250 M Street and 600 M Street)	The remaining parcels include approximately 1,130 residential units, 698,000 square feet of office uses, and 31,000 square feet of ground-level retail. Anticipated completion: 2019	No	Yes, the original PUD was approved in February 2004 under case number 03-12/03-13. Additional zoning cases have followed, with the latest amendment approved in November 2012 under case number 03-12N/03-13N.	No, the development is located just outside the study area.
The Yards at Southeast Federal Center, Phase 3	Mixed-use development consisting of approximately 1,860 residential units, 1.5 million square feet of office development, and 217,000 square feet of ground-level retail. Anticipation completion: 2027	Phase 3 is located within the study area. The remaining parcels are not located within the study area.	No.	No, the development is not approved and will not be complete before the study year.
Congressional Square, Phase 1	290,000-square foot office building with 14,000 square feet of ground-level retail. Anticipation completion: 2016	No	No. The development is by-right.	No, the development is located just outside the study area.

Development Name	Development Plan	Located in study area?	Approved?	Include in background?
Congressional Square, Phase 2	505,000-square foot office building with 16,000 square feet of ground-level retail. Anticipated completion: 2018	No	No. The development is by-right.	No, the development is located just outside the study area.
Riverfront on the Anacostia, Phase 1	305-unit apartment building with 20,000 square feet of ground-level retail Anticipated completed: 2016	Yes	Yes, the PUD was approved in January 2013 under case number 04-14C	Yes. Trip generation, mode split, and trip assignment assumptions based on the "RiverFront on the Anacostia Planned Unit Development Transportation Impact Study" performed by Gorove/Slade in August 2012.
Riverfront on the Anacostia, Phase 2	Mixed-use development consisting of two office buildings totaling 465,000 square feet with 60,000 square feet of ground-level retail, as well as one 325-unit hotel building. Anticipated completion: 2018	Yes	Yes, the PUD was approved in January 2013 under case number 04-14C	No, Phase 2 of development will not be complete before the study year.
Velocity, Phase 2 (Square 699N)	287-unit residential building Anticipated completion: 2014	No	No. The development is by-right.	No, the development is located just outside the study area.
Velocity, Phase 3 (Square 699N)	300,000-square foot office building with 12,000 square feet of ground-level retail Anticipated completion: 2019	No	No. The development is by-right.	No, the development is located just outside the study area and will not be complete before the study year.
Park Chelsea (Square 737, Phase 1)	432-unit residential building Anticipated completion: 2014	No	No. The development is by-right.	No, the development is located just outside the study area.
800 New Jersey Avenue SE (Square 737, Phase 1)	336-unit residential building with 35,000 square feet of ground-level retail containing a grocery store Anticipated completion: 2017	No	No. The development is by-right.	No, the development is located just outside the study area.
Gallery at Capitol Riverfront (1111 New Jersey Ave SE)	324-unit residential building with 11,000 square feet of ground-level retail Anticipated completion: 2016	Yes	Yes. The PUD was approved in March 2008 under case number 07-32.	Yes. Trip generation, mode split, and trip assignment assumptions outlined below.
Half Street Hotel	196-room hotel with 15,000 square feet of ground-level retail Anticipated completion: 2015	Yes	Yes, the PUD was approved in February 2011 under case number 08-30A	Yes. Trip generation, mode split, and trip assignment assumptions based on the "Monument Ballpark – Square 700 & 701 Transportation Impact Study" performed by Wells & Associates in December 2006.

Development Name	Development Plan	Located in study area?	Approved?	Include in background?
Half Street Residential	340-unit residential building with 20,000 square feet of ground-level retail Anticipated completion: 2017	Yes	Yes, the PUD was approved in November 2007 under case number 06-46A	Yes. Trip generation, mode split, and trip assignment assumptions based on the "Monument Ballpark – Square 700 & 701 Transportation Impact Study" performed by Wells & Associates in December 2006.
50 M Street	195-room hotel with 5,000 square feet of ground-level retail Anticipated completion: 2016	Yes	No. The development is by-right but is subject to Capitol Gateway Overlay review.	No, the development has not been approved for overlay review.
1 M Street	310,000 square foot office building with 15,000 square feet of ground-level retail space Anticipated completion: 2017	Yes	No, the PUD is still awaiting overlay review under case number 09-22	No, the PUD is not currently approved.
Square 701	Mixed-use development consisting of 224,000 square feet of office uses, 325 residential units, 170 hotel rooms, and 43,000 square feet of ground-level retail Anticipated completion: 2015	Yes	Yes, the PUD was approved in September 2013 under case number 12-05A. However, the PUD is currently awaiting review of a minor modification to the façade under case number 12-05B.	Yes. Trip generation, mode split, and trip assignment assumptions based on the "Square 701 Transportation Impact Study" performed by Gorove/Slade in September 2012.
1000 South Capitol Street	320,000-square foot office building Anticipate completion: 2017	No	No. The development is by-right.	No, the development is located just outside the study area.
1100 South Capitol Street	350,000-square foot office building Anticipate completion: 2018	Yes	No. The development is by-right.	No, the development will not be complete before the study year.
WMATA Chiller Plant	84-unit residential building with 5,300 square feet of ground-level retail Anticipated completion: 2017	Yes	No. The development is by-right but is subject to Capitol Gateway Overlay review.	No, the development has not been approved for overlay review.
Randall School	550-unit residential building with 56,000 square feet of ground-level retail. Anticipated completion: 2016	No	Yes, the PUD was approved in March 2014 under case number 07-13E.	No, the development is located just outside the study area.
Camden South Capitol	276-unit residential building with 3,000 square feet of ground-level retail. Completed in 2014	Yes	Yes, the PUD was approved in September 2007 under case number 06-41.	Yes. Although construction is complete, the counts were collected before the building was occupied. Trip generation, mode split, and trip assignment assumptions outlined below.

Development Name	Development Plan	Located in study area?	Approved?	Include in background?
Building 170	11,000 square feet ground-level retail Anticipated completion: 2014	No	Yes, the development was included in the DOT Headquarters/SE Federal Center PUD, which was approved in January 2004 under case number 03-05C.	No, the development is located just outside the study area.
Hampton Inn	165-room hotel Anticipated completion: 2015	Yes	Yes, the PUD was approved in December 2012 under case number 12-19	Yes. Trip generation, mode split, and trip assignment assumptions based on the "Ballpark Hotel Transportation Impact Study" performed by Gorove/Slade in October 2012.
100 V Street SW	Nine acre mixed-use development containing approximately 2.7 million square feet of office uses Anticipated completion: 2020	No	No	No, the development located just outside the study area and will not be complete before the study year.
20 K Street SE	400-unit residential building Anticipated completion: 2016	No	No. The development is by-right.	No, the development is located just outside the study area.
DC Water Occupied Sites, Parcel F1	16-screen movie theater with 2,500 seats Anticipated completion: 2016	Yes	Yes, the Consolidated PUD was approved in December 2013 under case number 13-05	Yes. Trip generation, mode split, and trip assignment assumptions based on the "DC Water Occupied Sites Planned Unit Development Transportation Impact Study" performed by Gorove/Slade in October 2013.
DC Water Occupied Sites, Parcels G1/2/3	G1: 350 unit residential building with 20,000 square feet of ground-level retail G2: 250 unit residential building with 15,000 square feet of ground-level retail G3: 15,000 square feet of ground-level retail Anticipated completion: 2027	Yes	Yes, the First-Stage PUD was approved in December 2013 under case number 13-05	No, the development will not be complete before the study year.

When approved background studies were not available, trip generation for the background developments was calculated based on the methodology outlined in the Institute of Transportation Engineers' (ITE) *Trip Generation*, 9th Edition. The Shopping Center trip rate was applied in lieu of individual trip rates, such as bank, pharmacy and supermarket, for the retail uses because applying individual rates would not account for interaction between the retail uses (shoppers visiting more than one store), and the Shopping Center trip rate does account for these uses and interactions. Additionally, the General Office Building, Residential Apartments, and Residential Condominiums/Townhomes rates were applied for office and residential uses to estimate trips generated by the background developments.

Additionally, for this report, the Trip Generation methodology was supplemented to account for the urban nature of the site (Trip Generation provides data for non-urban, low transit use sites). The WMATA Ridership Survey was used to determine transit reduction rates in order to account for trips taken by walking, bicycling, and transit. The mode split assumptions were based on the patterns and general findings from that document, observations of existing traffic, and the type and density of surrounding land uses. It was assumed that retail uses would generate a lot of local demand and therefore, have the highest assumed percentage of walking and biking trips. Residential based trips would be the most likely to use public transit, since they will be regular users that will be able to figure out and take advantage of the various routes and schedules. Although the location of the site near several major highways could lead to driving mode splits, the Metrorail, Metrobus, and DC Circulator service will be utilized to reach destinations in downtown areas of the District and to surrounding areas.

Table 16 summarizes the mode split assumptions for the background developments with no available approved study. The mode split assumptions were applied to the base trip generation for the background developments as a reduction to the vehicular trips estimated by Trip Generation.

Table 16: Mode Split Assumptions for Background Developments

Land Use	Mode Split			
	Vehicle	Transit	Walk	Bike
Residential	45%	45%	7%	3%
Retail	40%	40%	15%	5%

Based on the available background studies and the trips estimated following the methodology outlined above, Table 17 shows the total number of trips generated by the background developments. Detailed trip generation tables are included in the Technical Attachments.

Table 17: Trip Generation for Background Developments

Development	Trip Generation					
	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Akridge at Half Street						
25 M Street	172	26	198	43	159	202
1201 Half Street	94	15	109	24	94	118
Half Street Residential	18	53	71	66	44	110
Riverfront on the Anacostia (Phase 1)						
Total Vehicular Trips	16	52	68	61	39	100
Gallery at Capitol Riverfront						
Total Vehicular Trips	18	62	80	67	40	107
Monument at Half Street						
Half Street Hotel	35	23	58	45	41	86

Development	Trip Generation					
	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
<i>Half Street Residential</i>	20	64	84	74	48	122
Square 701						
Total Vehicular Trips	208	103	311	145	227	372
Camden South Capitol						
Total Vehicular Trips	14	50	64	51	29	80
Hampton Inn						
Total Vehicular Trips	11	8	19	13	11	24
DC Water Occupied Sites (Parcel F1)						
Total Vehicular Trips	0	0	0	43	77	120
Total Trips	606	456	1,062	632	809	1,441

These trips were then distributed and assigned to the network based on the direction of approach included in the background study. Where a background study was not available, trips generated by the background developments were distributed using an analysis based on Metropolitan Washington Council of Governments (MWCOC) transportation planning models, as shown in Figure 16. Data from Traffic Analysis Zones (TAZs), including home-based and non-home-based trips, were used to determine the inbound and outbound vehicular trip distribution. The data used encompassed trips to and from the Southwest Waterfront development in 2010 and 2030. The data obtained from the MWCOC model was used in order to estimate the directions of approach for the study area. One trip distribution was assumed for all land uses because the MWCOC data for Southwest Waterfront aggregated all land uses for each TAZ.

In addition to the above outlined background developments, other traffic increased due to inherent growth on the study area roadways were accounted for with a 1% per year growth rate compounded annually over the study period (2014-2017). This rate was estimated based on a comparison between existing and past average annual weekday traffic volumes obtained from DDOT for 2000-2012. This growth rate was applied to all through movements along M Street SE/SW. No growth rate was applied to the other study area roadways, including South Capitol Street.

The traffic volumes generated by the background developments and the inherent growth along M Street SE/SW were added to the existing traffic volumes in order to establish the 2017 Background traffic volumes. The traffic volumes for the 2017 Background conditions are shown on Figure 17.

Future Conditions with Development (2017 Future)

Existing traffic volumes and travel patterns in the study area were analyzed and combined with the data obtained from the MWCOC for Southwest Waterfront in order to determine the trip distribution for the trips added by the proposed development, as shown on Figure 18. Based on this review and the proposed site access locations shown previously on Figure 9, the site-generated trips shown previously were distributed through the study area intersections, as shown on Figure 19 for the morning and afternoon peak hours.

The traffic volumes for the 2017 Future conditions were calculated by adding the development-generated traffic volumes to the 2017 Background traffic volumes. Thus, the future condition with the proposed development scenario includes traffic generated by: existing volumes, background development through the year 2017, inherent growth along M Street SE/SW through 2017, and the proposed 1244 South Capitol St. SE development. The 2017 Future traffic volumes are shown on Figure 20.

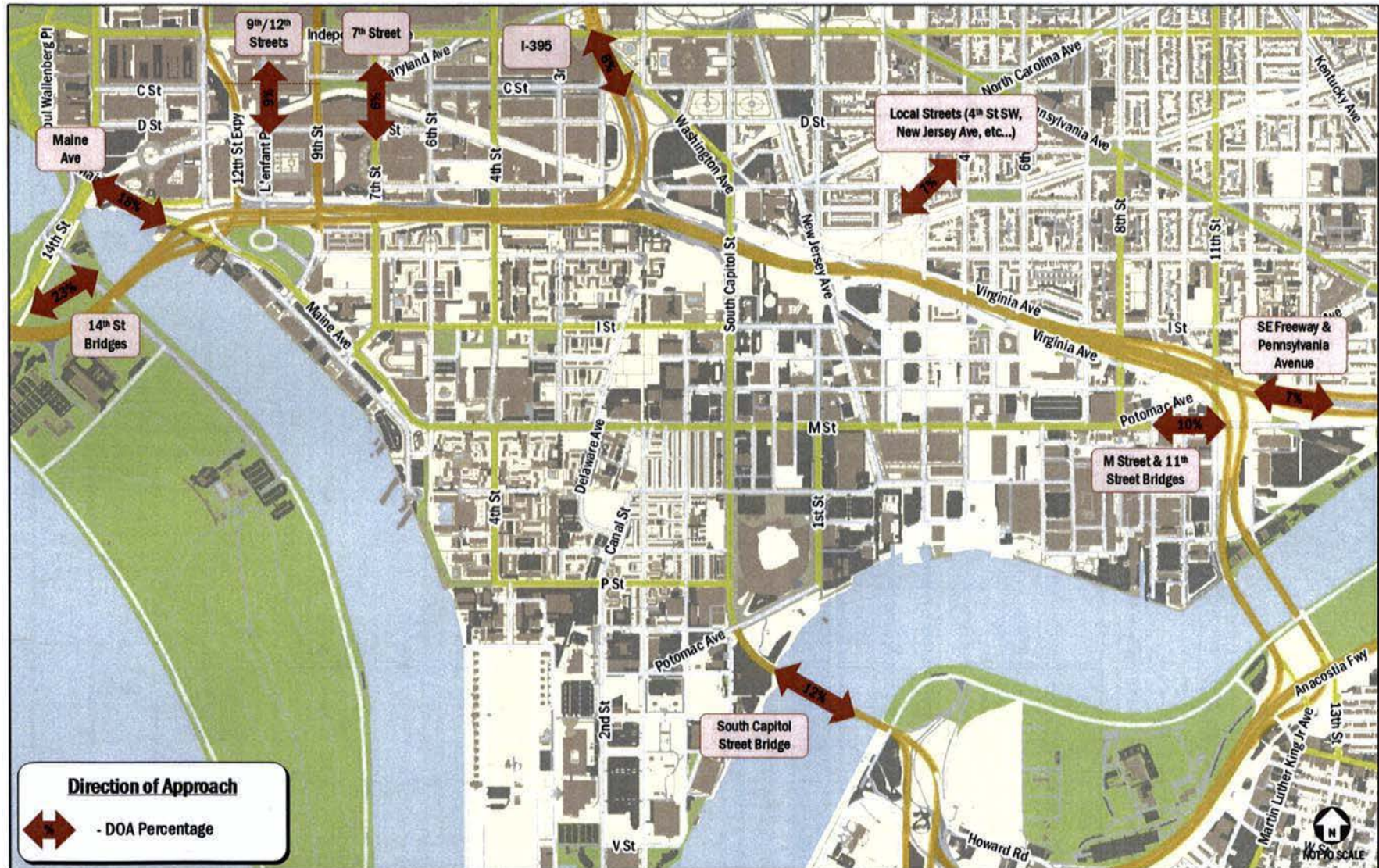


Figure 16: DOA for Background Developments

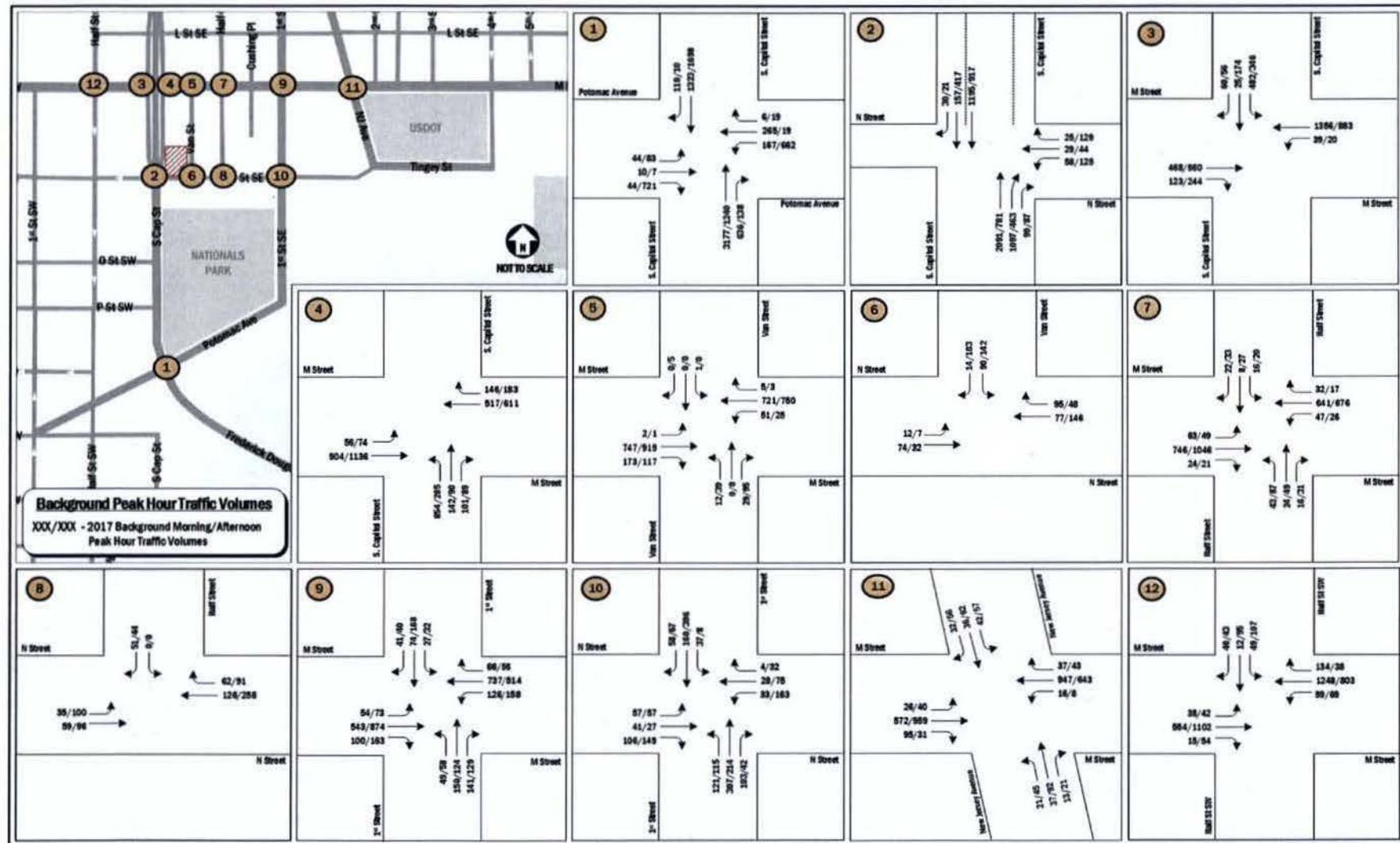


Figure 17: 2017 Background Peak Hour Traffic Volumes

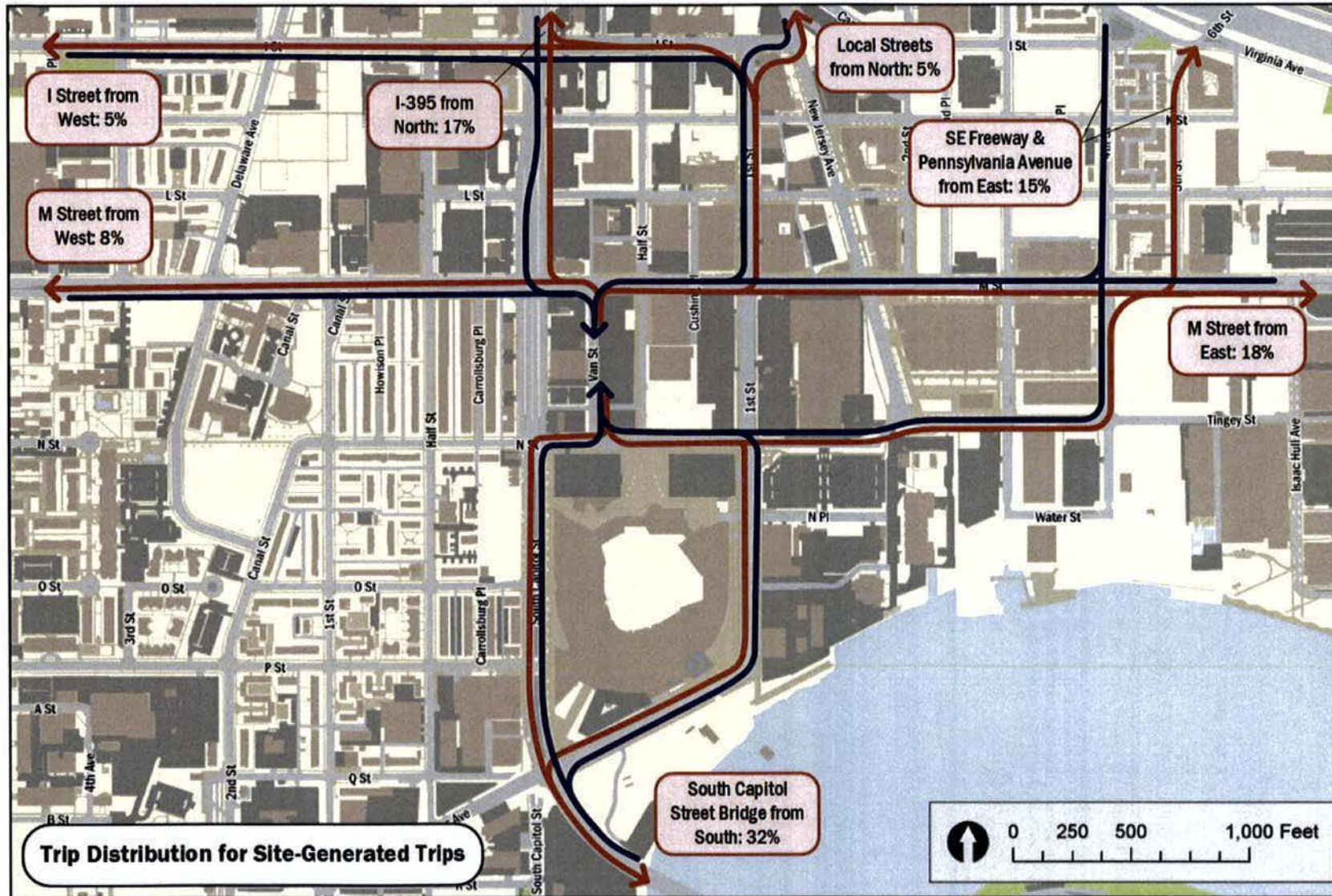


Figure 18: DOA for Site-Generated Trips

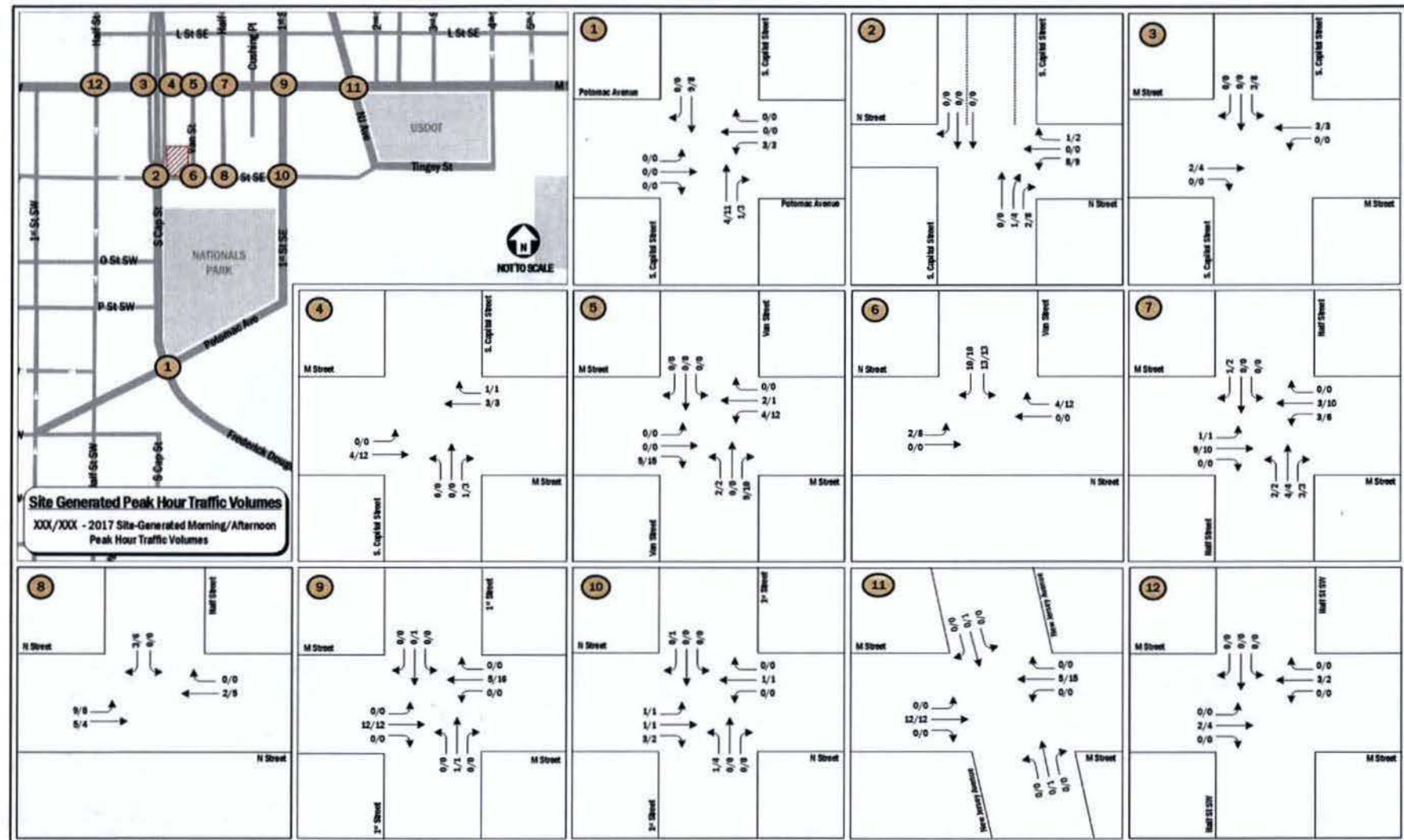


Figure 19: Site-Generated Peak Hour Traffic Volumes

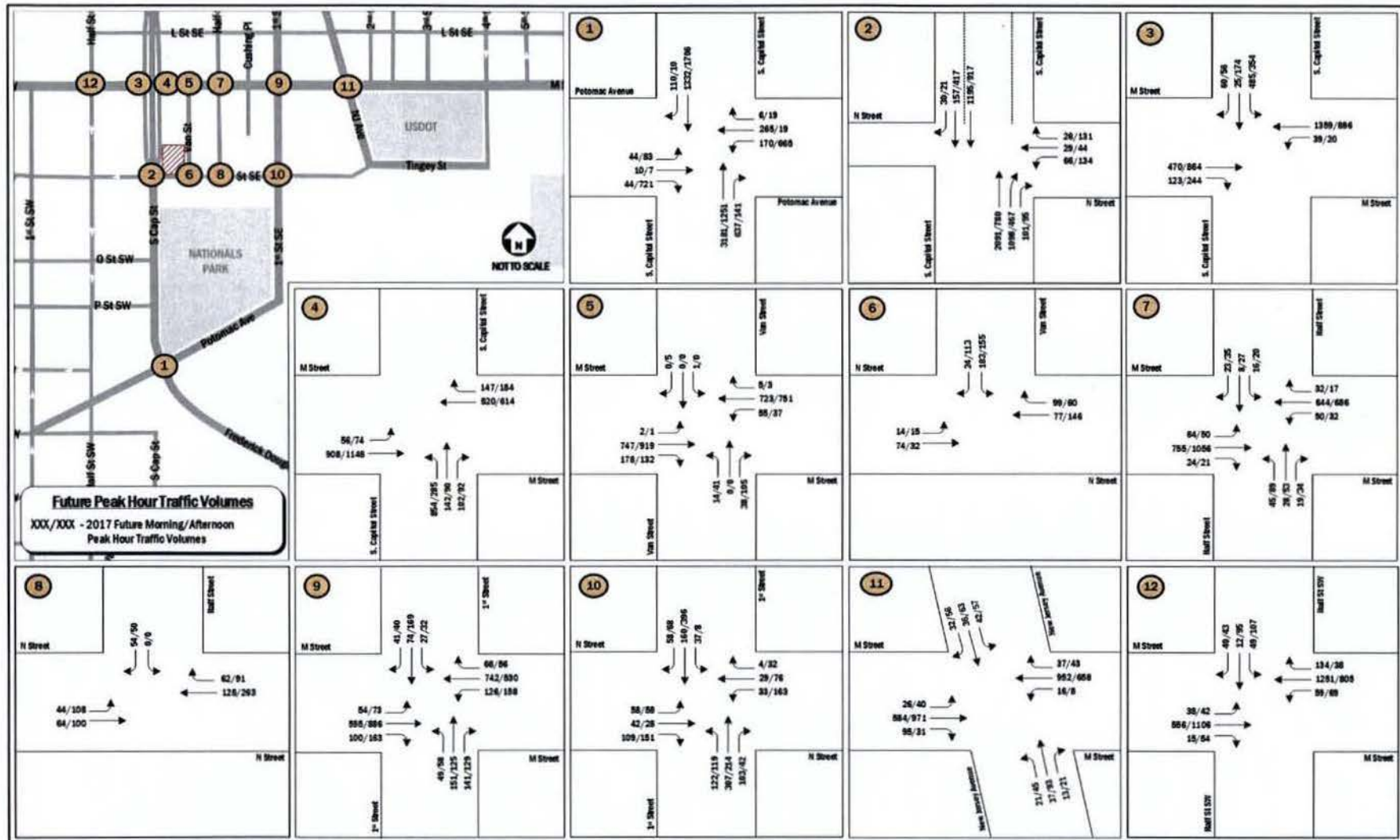


Figure 20: 2017 Future Peak Hour Traffic Volumes

Geometry and Operations Assumptions

The following section reviews the roadway geometry and operations assumptions made and the methodologies used in the roadway capacity analyses, summarized previously in Table 14

Existing Conditions

Gorove/Slade conducted field reconnaissance to confirm the existing lane configurations and traffic controls at the intersections within the study area, shown on Figure 21. Existing signal timings and offsets were obtained from DDOT and confirmed during field reconnaissance.

Future Conditions without Development (2017 Background)

The lane configurations for the 2017 Background conditions are based on the existing lane configurations, with the addition of any roadway improvements included with the construction of the background developments. Namely, this includes the construction of Cushing Place SE south of M Street SE to connect to N Street SE, as outlined in the “Square 701 Transportation Impact Study” performed by Gorove/Slade in September 2012. However, this intersection was not studied, so it is not shown on the graphics.

While the M Street SE/SW Transportation Study, as outlined previously, proposes several roadway and operational improvements in the study area, no roadway infrastructure changes were assumed to be constructed prior to 2017. At the time of this analysis, no specific plans for implementation have been developed. Even once specific improvement plans are made, no major roadway infrastructure changes will likely be implemented at the study area intersections by 2017.

The lane configurations and traffic controls for the 2017 Background conditions are shown on Figure 21.

Future Conditions with Development (2017 Future)

The lane configurations for the 2017 Future conditions are based on the lane configurations for the 2017 Background conditions. No roadway infrastructure or signal timing changes were assumed for the 2017 Future conditions. The lane configurations and traffic controls for the 2017 Future conditions are shown on Figure 21.

Vehicular Analysis Results

Intersection Capacity Analysis

Intersection capacity analyses were performed for the three scenarios outlined in previously at the intersections contained within the study area during the morning and afternoon peak hours. *Synchro*, Version 7.0 was used to analyze the study intersections based on the Highway Capacity Manual (HCM) methodology.

The results of the capacity analyses are expressed in level of service (LOS) and delay (seconds per vehicle) for each approach. A LOS grade is a letter grade based on the average delay (in seconds) experienced by motorists traveling through an intersection. LOS results range from “A” being the best to “F” being the worst. LOS E is typically used as the acceptable LOS threshold in the District; although LOS F is sometimes accepted in urbanized areas.

The LOS capacity analyses were based on (1) the peak hour traffic volumes, (2) the lane use and traffic controls, and (3) the Highway Capacity Manual (HCM) methodologies (using the *Synchro* software). The average delay of each approach and LOS is shown for the signalized intersections in addition to the overall average delay and intersection LOS grade. The HCM does not give guidelines for calculating the average delay for a two-way stop-controlled intersection, as the approaches without

stop signs would technically have no delay. Detailed LOS descriptions and the analysis worksheets are contained in the Technical Attachments.

Table 18 shows the results of the capacity analyses, including LOS and average delay per vehicle (in seconds) for the Existing and 2016 Background and Future scenarios. The capacity analysis results are shown on Figure 22 for the morning peak hour and on Figure 23 for the afternoon peak hour.

The majority of study intersections operate at acceptable conditions during the morning and afternoon peak hours for the Existing, 2017 Background, and 2017 Future scenarios. However, the following intersections operate under unacceptable conditions during one or more peak hour:

- **South Capitol Street Southbound and M Street**
The eastbound approach of M Street at South Capitol Street southbound operates under unacceptable conditions during the existing morning peak hour. The addition of the background trips, inherent growth along M Street, and site-generated traffic volumes exacerbates this failing operation.
- **South Capitol Street Northbound and M Street**
The westbound approach of M Street at South Capitol Street northbound is projected to operate under unacceptable conditions during the afternoon peak hour in the 2017 Background conditions. The addition of the site-generated traffic volumes exacerbates this failing operation.
- **South Capitol Street and N Street**
The southeastbound thru lane of the South Capitol Street southbound ramp at N Street operates under unacceptable conditions during the existing morning and afternoon peak hours. The addition of the background trips and site-generated traffic volumes exacerbates this failing operation.
- **South Capitol Street and Potomac Avenue**
During the morning peak hour, the west- and northbound approaches of the South Capitol Street and Potomac Avenue intersection operate under unacceptable conditions. During the afternoon peak hour, the east- and westbound approaches of the South Capitol Street and Potomac Avenue intersection operate under unacceptable conditions. The level of delay along these approaches also causes the overall intersection to operate under unacceptable conditions during the morning and afternoon peak hours. The addition of the background trips and site-generated traffic volumes exacerbates this failing operation.
- **M Street SE and Van Street SE**
The northbound approach of Van Street SE at M Street SE is projected to operate under unacceptable conditions during the afternoon peak hour in the 2017 Background conditions. The addition of the site-generated traffic volumes exacerbates this failing operation.

Generally speaking, the proposed development is considered to have an impact at an intersection within the study area if the capacity analyses show an LOS F at an intersection or along an approach in the future conditions with the proposed development where one does not exist in the future conditions without the proposed development. Following these guidelines, the site does not cause a detrimental impact to the study area intersections.

Queueing Analysis

In addition to the capacity analyses presented above, a queueing analysis was performed at the study intersections. The queueing analysis was performed using the *Synchro* software. The 50th percentile and 95th percentile maximum queue

lengths are shown for each lane group at the study area signalized intersections. The 50th percentile maximum queue is the maximum back of queue on a typical cycle. The 95th percentile queue is the maximum back of queue with 95th percentile traffic volumes. For unsignalized intersection, the 95th percentile queue is reported for each lane group (including free-flowing left turns and stop-controlled movements) based on the HCM calculations. The HCM does not give guidelines for calculating queues for an all-way stop-controlled intersection, so this information is not reported.

Table 19 shows the queuing results for the study area intersections. No significant impacts to the queuing results are seen with the addition of the proposed 1244 South Capitol St. SE development. During the morning and afternoon peak hours, queues are slightly increased at all of the study intersections, but no major impacts are seen. In addition, the extremely long queues at the intersection of South Capitol Street and Potomac Avenue that are present in the existing conditions are exacerbated with the addition of the background trips, as well as the site-generated trips. A slight increase in queuing is also seen along the northbound approach of Van Street at M Street, but the queue is still relatively short (under 200 feet). Overall, the site does not have a significant impact on queuing in the study area.

Improvements

All of the locations in the study with unacceptable levels of delay occur in scenarios with and without the development of the project -- these capacity issues will occur regardless of development. Although this is the case, this section of the report reviews potential improvements that could be undertaken at these locations.

All of the intersections with failing levels of service (regardless of scenario) are studied in the South Capitol Street FEIS, with the exception of the intersection of M Street SE and Van Street SE. The FEIS preferred alternative contains improvements at each of these intersections, although they are expected to be in place after 2017 and are thus not incorporated into the analysis. As stated previously, the goal of the South Capitol Street FEIS is to address the problems of the corridor in a way that both addresses the transportation issues, while also revitalizing the surrounding neighborhoods south of the National Mall and transforming the roadway into a grand urban gateway in to the District.

The future South Capitol Street corridor will correct design deficiencies, improving safety issues for all users, including drivers, transit riders, pedestrians, and bicyclists, as well as providing key connections in the local, regional, and national transportation network. Since the goals of the FEIS are not solely based on improving vehicular levels of service, the delays shown along South Capitol Street are not necessarily expected to be mitigated after construction of the preferred alternative. This report defers to the conclusions reached in the FEIS and recommends the preferred alternative be implemented in the long-term. Therefore, no improvements are recommended along the South Capitol Street corridor.

Outside of the South Capitol Street corridor, the intersection of Van Street with M Street is projected to operate under unacceptable conditions in the 2016 Future conditions. The unacceptable conditions are present regardless of construction of the 1244 South Capitol St. SE development. One potential improvement at this location would be the installation of a traffic signal. However, based on the capacity analysis, traffic volumes, and traffic signal spacing along M Street a traffic signal is not warranted or feasible. It is highly likely that drivers that encounter delays at this intersection will change their driving patterns to avoid the intersection in the future and use other paths on the street grid. Thus, no improvements are recommended at this intersection.

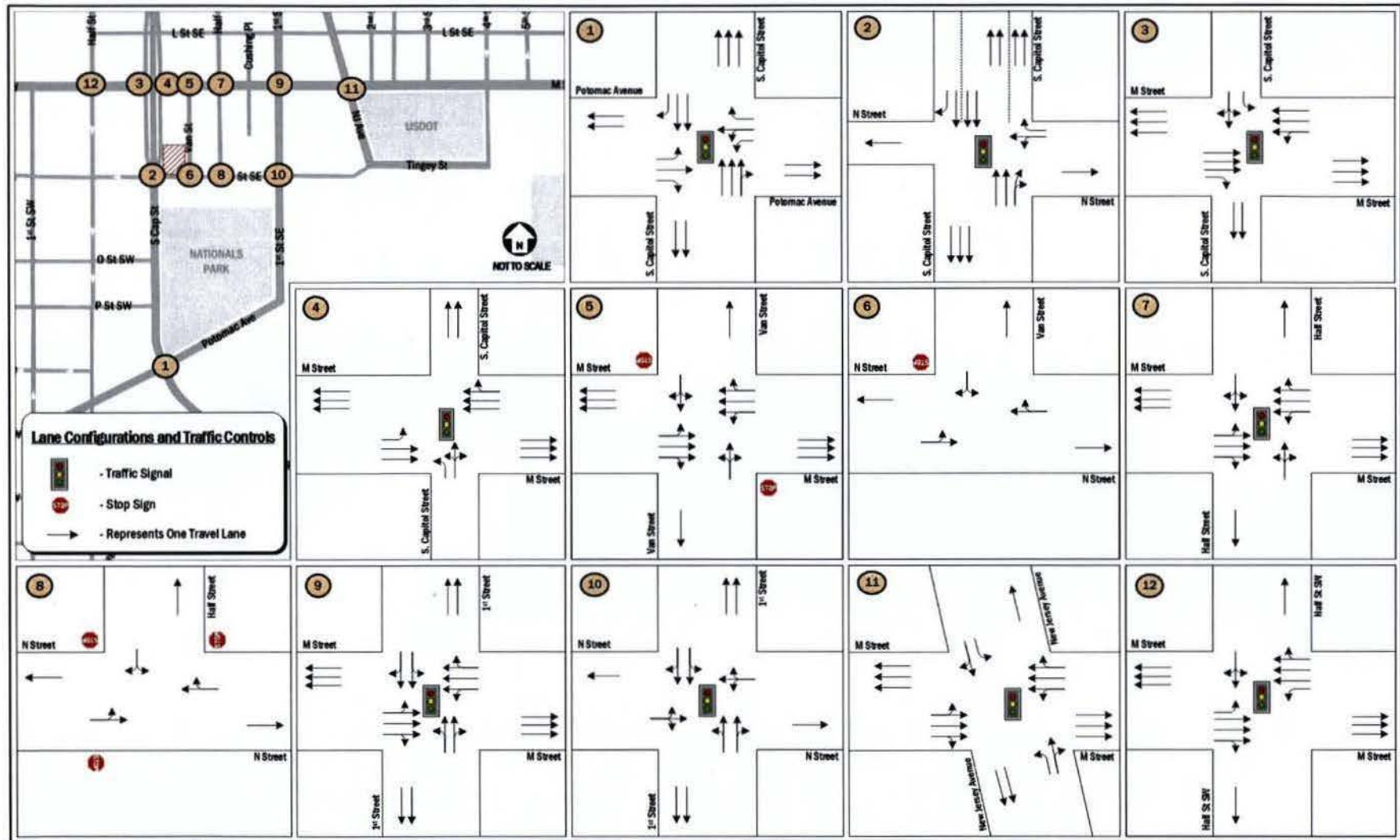


Figure 21: Lane Configurations and Traffic Controls

Table 18: Capacity Analysis Results

Intersection	Approach	Existing Conditions				Future Background Conditions (2017)				Total Future Conditions (2017)			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Potomac Avenue & South Capitol Street	Overall	87.3	F	171.1	F	100.7	F	182.4	F	101.1	F	182.8	F
	Eastbound	69.1	E	696.9	F	69.1	E	699.0	F	69.1	E	700.1	F
	Westbound	98.4	F	136.9	F	97.6	F	230.8	F	97.5	F	233.5	F
	Northbound	116.8	F	28.3	C	137.1	F	30.1	C	137.8	F	30.3	C
	Southbound	11.7	B	54.6	D	11.4	B	58.8	E	11.6	B	60.0	E
N Street & South Capitol Street	Overall	13.6	B	55.3	E	20.1	C	54.6	D	21.8	C	54.9	D
	Westbound	72.0	E	70.7	E	70.9	E	71.8	E	70.8	E	72.5	E
	Northbound	6.1	A	3.3	A	14.0	B	4.2	A	16.0	B	4.5	A
	Southbound	15.2	B	21.8	C	17.3	B	25.5	C	18.2	B	26.0	C
	Southeastbound Th	98.8	F	280.8	F	98.0	F	271.7	F	98.0	F	271.7	F
	Southeastbound Rig	57.5	E	47.6	D	57.6	E	47.7	D	57.6	E	47.7	D
M Street & South Capitol Street SB	Overall	29.7	C	42.1	D	35.1	D	42.3	D	35.3	D	42.5	D
	Eastbound	89.5	F	73.0	E	90.4	F	75.5	E	90.5	F	75.6	E
	Westbound	1.9	A	2.0	A	3.1	A	2.1	A	3.2	A	2.1	A
	Southbound	43.8	D	36.1	D	53.1	D	39.8	D	53.3	D	40.1	D
M Street & South Capitol Street NB	Overall	31.7	C	21.7	C	36.8	D	23.0	C	37.1	D	23.0	C
	Eastbound	1.3	A	2.8	A	1.8	A	3.7	A	1.8	A	3.7	A
	Westbound	58.6	E	35.8	D	82.1	F	39.1	D	83.5	F	39.2	D
	Northbound	38.4	D	46.6	D	40.4	D	48.2	D	40.5	D	48.3	D
M Street & Van Street SE	Eastbound Left	0.2	A	0.1	A	0.1	A	0.1	A	0.1	A	0.1	A
	Westbound Left	0.1	A	0.1	A	2.5	A	1.9	A	2.6	A	2.8	A
	Northbound	8.8	A	13.3	B	14.2	B	61.4	F	14.7	B	79.2	F
	Southbound	17.3	C	10.5	B	20.0	C	9.8	A	21.3	C	9.7	A
N Street & Van Street SE	Eastbound Left	0.1	A	0.6	A	1.2	A	1.4	A	1.3	A	2.6	A
	Southbound	9.8	A	9.5	A	11.8	B	13.9	B	12.3	B	15.2	C
M Street & Half Street SE	Overall	3.2	A	4.7	A	6.1	A	9.8	A	6.3	A	10.2	B
	Eastbound	2.2	A	3.0	A	4.2	A	7.9	A	4.9	A	8.3	A
	Westbound	0.4	A	1.6	A	0.9	A	3.8	A	1.1	A	3.9	A
	Northbound	36.5	D	33.3	C	41.0	D	36.8	D	35.8	D	37.3	D
	Southbound	37.4	D	36.0	D	31.6	C	26.3	C	29.8	C	25.8	C
N Street & Half Street SE	Overall	7.2	A	8.2	A	8.2	A	10.4	B	8.4	A	10.6	B
	Eastbound	7.3	A	7.6	A	8.3	A	9.4	A	8.5	A	9.7	A
	Westbound	7.2	A	8.5	A	8.5	A	11.2	B	8.6	A	11.4	B
	Southbound	6.7	A	7.1	A	7.6	A	8.1	A	7.7	A	8.2	A

Intersection	Approach	Existing Conditions				Future Background Conditions (2017)				Total Future Conditions (2017)			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
M Street & 1st Street SE	Overall	11.4	B	14.3	B	12.2	B	14.3	B	12.1	B	14.3	B
	Eastbound	16.7	B	16.5	B	16.0	B	15.7	B	15.5	B	15.7	B
	Westbound	2.3	A	4.9	A	3.3	A	5.3	A	3.3	A	5.4	A
	Northbound	19.3	B	22.2	C	23.9	C	23.6	C	23.9	C	23.5	C
	Southbound	21.4	C	22.5	C	22.0	C	23.1	C	22.0	C	23.1	C
N Street & 1st Street SE	Overall	13.0	B	15.6	B	15.5	B	18.6	B	15.6	B	18.8	B
	Eastbound	25.4	C	14.1	B	31.1	C	18.0	B	31.5	C	18.2	B
	Westbound	25.9	C	19.1	B	26.7	C	23.0	C	26.9	C	23.2	C
	Northbound	7.1	A	14.6	B	8.1	A	17.5	B	8.1	A	17.6	B
	Southbound	13.5	B	14.1	B	14.7	B	17.4	B	14.7	B	17.6	B
M Street & New Jersey Avenue SE	Overall	22.5	C	15.4	B	23.9	C	19.5	B	24.1	C	19.6	B
	Eastbound	30.3	C	12.6	B	31.9	C	20.1	C	32.1	C	20.4	C
	Westbound	17.4	B	15.7	B	18.9	B	16.9	B	19.0	B	17.0	B
	Northbound	20.7	C	21.9	C	20.9	C	22.3	C	20.9	C	22.3	C
	Southbound	21.5	C	22.5	C	22.2	C	23.1	C	22.2	C	23.2	C
M Street & Half Street SW	Overall	13.2	B	18.0	B	13.0	B	17.2	B	13.0	B	17.2	B
	Eastbound	7.6	A	8.9	A	7.9	A	9.3	A	7.9	A	9.4	A
	Westbound	13.0	B	15.4	B	13.2	B	14.9	B	13.2	B	14.9	B
	Southbound	39.1	D	57.3	E	39.1	D	57.3	E	39.1	D	57.3	E

Table 19: Queueing Analysis Results

Intersection	Approach	Existing Conditions				Future Background Conditions (2017)				Total Future Conditions (2017)			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		50th	95th	50th	95th	50th	95th	50th	95th	50th	95th	50th	95th
Potomac Avenue & South Capitol Street	Eastbound Left	57	88	74	130	57	88	74	130	57	88	74	130
	Eastbound Thru	12	30	6	20	12	30	6	20	12	30	6	20
	Eastbound Right	0	30	~1255	#1510	0	30	~1259	#1514	0	30	~1260	#1515
	Westbound Left	95	160	~394	#523	160	246	~550	#678	163	250	~554	#683
	Westbound LT	318	#531	~386	#516	~342	#549	~562	#689	~342	#549	~566	#693
	Westbound Right	0	8	1	22	0	15	4	27	0	15	4	27
	Northbound	~1629	#1730	395	375	~1733	#1830	456	425	~1737	#1834	463	431
	Southbound Thru	255	287	924	#1080	254	286	~992	#1130	253	302	~1003	#1141
	Southbound Right	1	14	2	m4	1	14	2	m4	1	16	2	m4

Intersection	Approach	Existing Conditions				Future Background Conditions (2017)				Total Future Conditions (2017)			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		50th	95th	50th	95th	50th	95th	50th	95th	50th	95th	50th	95th
N Street & South Capitol Street	Westbound LT	115	102	139	181	154	127	201	247	168	136	213	261
	Westbound Right	10	18	103	143	41	47	150	194	43	47	151	198
	Northbound Thru	8	m9	36	43	13	m14	39	45	14	m14	39	45
	Northbound Right	188	m46	59	71	~330	m72	59	65	~348	m80	68	78
	Southbound	344	453	318	412	371	493	352	443	381	506	357	443
	Southeastbound Thru	168	#304	~634	#845	166	#300	~620	#831	166	#300	~620	#831
	Southeastbound Right	0	33	4	25	0	34	6	31	0	34	6	31
M Street & South Capitol Street SB	Eastbound Thru	109	145	210	251	150	190	262	304	151	191	264	305
	Eastbound Right	0	87	47	m108	0	88	52	m114	0	89	52	m114
	Westbound LT	10	30	10	10	33	m38	13	13	34	m39	13	13
	Southbound Left	188	256	131	207	260	341	210	312	261	343	213	316
	Southbound TR	170	236	165	253	248	329	204	305	249	330	208	311
M Street & South Capitol Street NB	Eastbound Left	0	m0	0	0	0	m0	0	m0	0	m0	0	m0
	Eastbound Thru	10	8	69	57	30	18	95	79	30	20	96	78
	Westbound TR	143	188	125	163	186	#275	197	244	188	#278	198	245
	Northbound Left	375	534	165	255	401	#582	184	280	401	#582	184	280
	Northbound LTR	364	518	152	241	380	542	157	250	381	542	158	252
M Street & Van Street SE	Eastbound Left	--	0	--	0	--	0	--	0	--	0	--	0
	Westbound Left	--	0	--	0	--	5	--	4	--	5	--	6
	Northbound	--	0	--	2	--	31	--	142	--	41	--	176
	Southbound	--	1	--	1	--	1	--	1	--	1	--	1
N Street & Van Street SE	Eastbound Left	--	0	--	0	--	1	--	1	--	1	--	1
	Southbound	--	7	--	8	--	21	--	58	--	27	--	72
M Street & Half Street SE	Eastbound	28	43	39	65	54	88	105	165	57	93	109	168
	Westbound	1	4	16	23	10	17	33	43	11	17	34	43
	Northbound	5	18	4	18	51	67	96	120	56	71	102	127
	Southbound	10	35	27	50	13	37	26	45	13	37	26	45
N Street & Half Street SE	Eastbound	--	--	--	--	--	--	--	--	--	--	--	--
	Westbound	--	--	--	--	--	--	--	--	--	--	--	--
	Southbound	--	--	--	--	--	--	--	--	--	--	--	--
M Street & 1st Street SE	Eastbound	84	108	115	153	109	134	64	77	112	138	65	79
	Westbound	10	13	22	30	12	15	27	34	12	15	27	34
	Northbound	23	50	28	57	33	72	52	90	34	72	52	90
	Southbound	18	32	41	69	26	40	48	80	26	40	48	80

Intersection	Approach	Existing Conditions				Future Background Conditions (2017)				Total Future Conditions (2017)			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		50th	95th	50th	95th	50th	95th	50th	95th	50th	95th	50th	95th
N Street & 1st Street SE	Eastbound	23	65	10	25	68	138	61	81	70	142	64	84
	Westbound	29	50	92	160	34	58	104	188	36	59	105	189
	Northbound	33	53	30	50	57	86	72	105	57	86	73	107
	Southbound	35	59	55	88	43	70	77	123	43	70	78	124
M Street & New Jersey Avenue SE	Eastbound	80	117	54	90	112	161	114	166	115	164	117	169
	Westbound	106	139	58	82	142	183	89	120	143	184	91	123
	Northbound Left	11	23	19	45	11	23	19	45	11	23	19	45
	Northbound TR	14	29	37	73	19	35	47	88	19	35	47	88
	Southbound Left	16	33	21	50	22	41	24	56	22	41	24	56
	Southbound TR	26	46	39	79	34	56	49	94	34	56	50	95
M Street & Half Street SW	Eastbound Left	11	29	12	27	11	31	13	28	11	31	13	28
	Eastbound TR	44	58	125	145	60	76	152	173	60	76	153	175
	Westbound Left	15	m45	32	74	17	m49	49	m69	17	m49	49	m69
	Westbound TR	222	267	150	195	241	295	205	256	242	295	206	257
	Southbound	60	105	231	274	60	105	231	274	60	105	231	274

~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

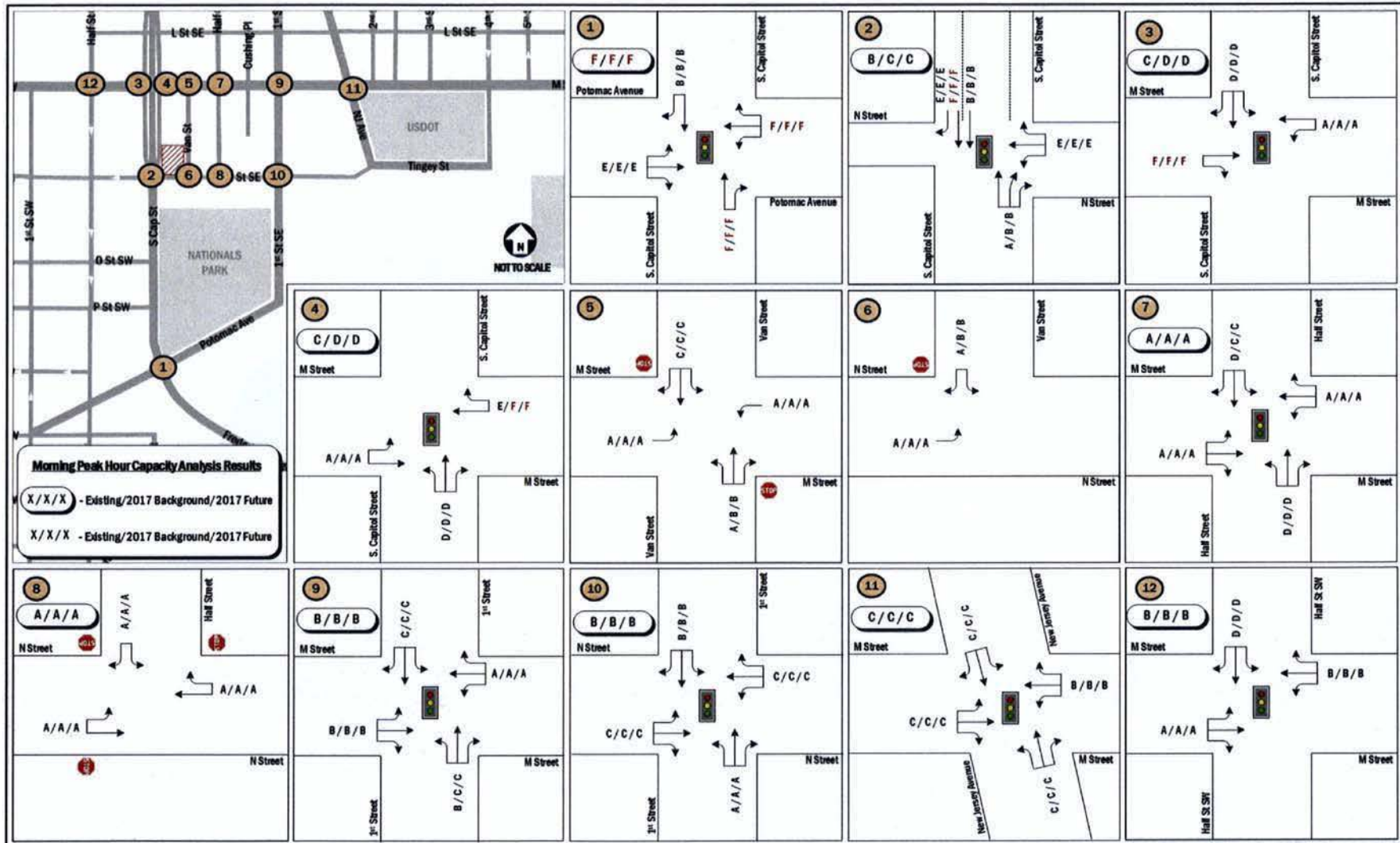


Figure 22: Morning Peak Hour Capacity Analysis Results

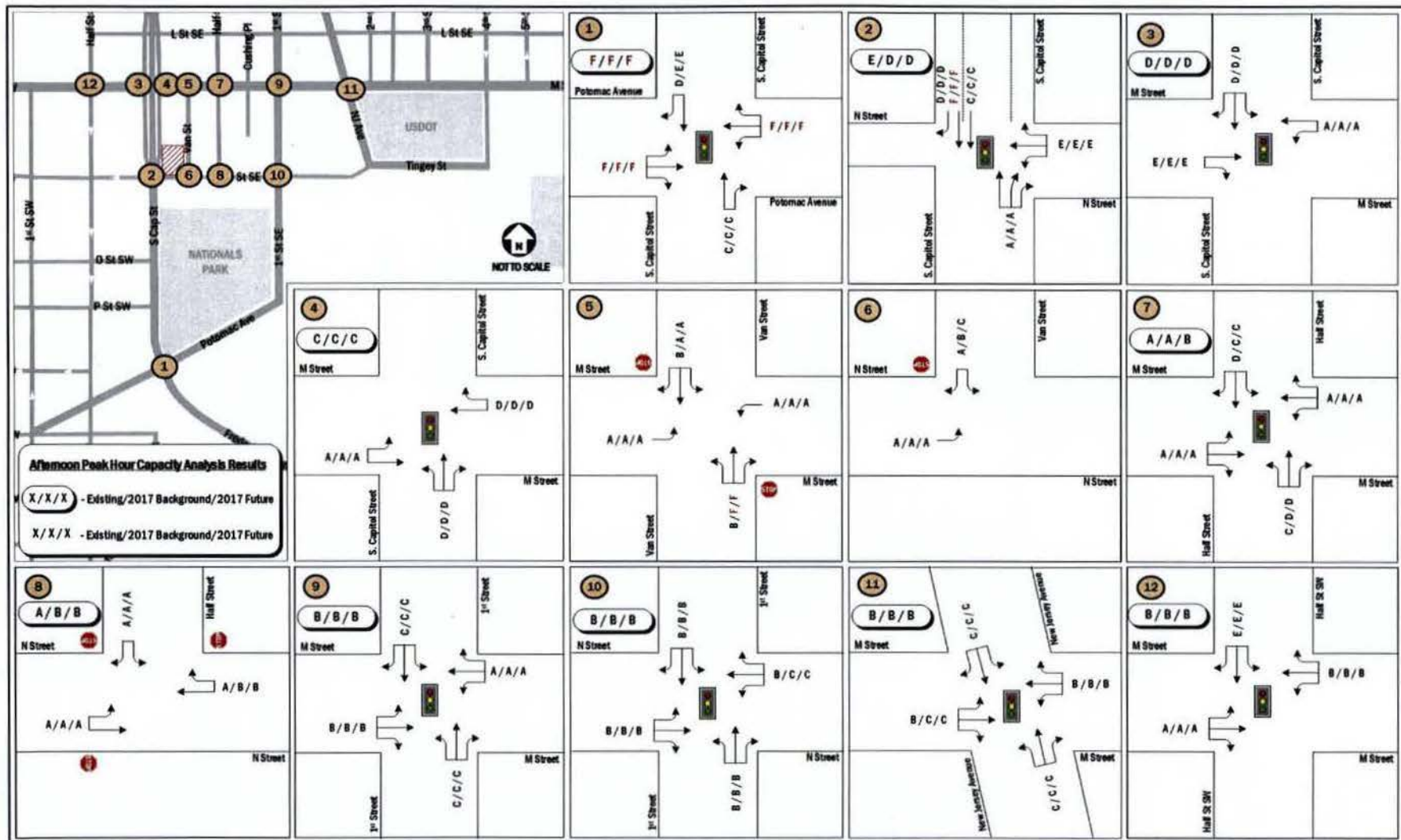


Figure 23: Afternoon Peak Hour Capacity Analysis Results

Non-Auto Impacts

Transit

The trip generation estimates for the 1244 South Capitol St SE development show that a substantial amount of new transit riders will be generated. The proposed development is projected to generate over 100 transit trips during the afternoon peak hour.

As stated previously, there is a significant amount of transit service nearby, including the Metrorail Green line and several bus routes. The Navy Yard Metrorail station is approximately a 600-foot walk from the site. A similar distance separates the development from major bus service along M Street. Two routes have frequent service on every day of the week: the DC Circulator Union Station-Navy Yard route and Metrobus' Minnesota Avenue-M Street line. The bus service in the area near the development is of high enough quality that census data shows slightly more bus commuters than rail commuters living in the census tract containing the development site.

WMATA studied capacity of Metrorail stations in its *Station Access & Capacity Study*. The study analyzed capacity of Metrorail stations for their vertical transportation, for example the capacity of the station at elevators, stairs and escalators to shuttle patrons between the street, mezzanine, and platforms. The study also analyzed stations capacity to process riders at fare card gates. For both analyses, vertical transportation and fare card gates, volume to capacity ratios were calculated for existing data (from 2005) and projections for the year 2030.

Based on findings presented in the *Station Access & Capacity Study*, the Navy Yard station can accommodate the additional riders generated by the 1244 South Capitol St SE development. The study did not find any high volume to capacity ratios at the station, with the exception of the fare card gates at the eastern end of the Navy Yard mezzanine, which had a volume to capacity ratio of 0.61, which WMATA does not consider a problem worthy of improvement but instead a concern that should be reevaluated in the future. The transit riders generated by the development will likely be using the western Navy Yard fare card gates, so this concern does not affect the project. The WMATA study does note that the capacity analyses were performed prior to the expansion of the western Navy Yard portal in anticipation of National's Park, and thus the concerns noted for 2030 at the eastern fare card gates may not be observed in future studies.

WMATA also studies capacity for its bus routes. DC's *Transit Future System Plan*, lists the bus routes with the highest load factor (a ratio of passenger volume to bus capacity). None of the Metrobus routes that travel near the 1244 South Capitol St SE site are cited for having unacceptable load factors. Table 3, shown previously, also includes the bus Level of Service (LOS) for several bus routes located near the site. The table shows that all of the study area bus routes have a Transit LOS of either B or C. Thus, the local bus service can accommodate the future riders generated by the 1244 South Capitol St SE development.

Bicycle

Of all of the modes analyzed in this report, the trip generation estimates for cycling are the lowest. The projected trips are less than 20 bicycle trips during the morning and afternoon peak hours combined for the 1244 South Capitol St SE development. Although bicycling will be an important mode for getting to and from the site, with significant bicycle facilities located on site and quality routes to and from the site, the impacts from bicycling will be relatively less than impacts to other modes.

The cyclists traveling to and from the site area expected to take advantage of the existing and planned routes that exist. Cyclists can use the bike lanes on 1st Street SE to access M Street and other local destinations. Continuing north past M

Street on 1st Street SE, cyclists can use K and I (Eye) Streets to travel east/west to both 4th Street SW, and the one-way pair of 4th and 6th Streets SE. These north-south routes provide quality access to downtown and Capitol Hill. Additionally, P Street SW, across South Capitol Street from the site can also be used to access 4th Street SW, and via the Anacostia Riverwalk Trail, 15th Street and other major facilities near the National Mall.

Based on the trip generation estimates for bicycling, and the quality of the routes near the project's location, the 1244 South Capitol St SE development will not have a negative impact to bicycle facilities in the study area.

Pedestrian

The 1244 South Capitol St SE development is located in a walkable area, with connections to major existing and future retail locations, residential neighborhoods, and transit connections. The trip generation estimates project less than 50 walking trips during the morning and afternoon peak hours combined for the development.

The origins and destinations of these trips are likely to be

- Employment opportunities where residents can walk to work, such as the USDOT headquarters, Navy Yard, and other office buildings on the M Street corridor
- Retail locations, such the planned restaurants and shops at The Yards, and other retail sites along the M Street corridor
- Nationals' Park and the future movie theater on the DC Water site, where many residents can walk.

Based on these origins/destinations, most pedestrians generated by the 1244 South Capitol St SE development will walk along Van Street SE to reach destinations on the M Street corridor. There will also be use of Tingey & N Streets SE to walk to The Yards and other developments in near SE.

In addition to these trips, the transit trips generated by the site will also generate pedestrian demand between the 1244 South Capitol St SE site and nearby transit stops. The vast majority of these transit riders will not travel farther than approximately two blocks, as they will use the Navy Yard Metro.

Most of the sidewalks surrounding the site are of high quality, although there are significant gaps in the network. A summary of sidewalk availability and quality and is shown on Figure 24. The sidewalks closest to the 1244 South Capitol St SE development, such as those along Potomac Avenue SE, and 1st Street SE north until N Street SE, and all sidewalks surrounding Nationals' Park are of high quality.

Outside of this area, some sidewalks are narrow or of sub-par quality, including

- East side of 1st Street NE between N and M Streets
- Tingey/N Streets within The Yards
- Half Street SE between M and N Street

Fortunately, the gaps within the network will be filled in with planned redevelopment projects. The Yards will reconstruct and upgrade Tingey Street, N Street, and the eastern side of 1st Street SE. Redevelopment on both sides of Half Street will create a high quality pedestrian experience adjacent to the Navy Yard Metrorail portal. Redevelopment of several sites on Buzzard Point along with improvements from the South Capitol Street EIS preferred alternative will vastly improve sidewalk conditions along Buzzard Point. Additionally, construction of the proposed development will include installing a sidewalk adjacent to the development, along the west side of Van Street SE where there is currently no sidewalk. This sidewalk will

connect to the one included in the site plan for the One M Street development, which is located just north of the proposed 1244 South Capitol St SE development

Additionally, South Capitol Street is a large barrier to pedestrian connectivity in the study area. Connections and crosswalks along South Capitol Street are limited due to the existing configuration of the roadway. However, as outlined previously, the South Capitol Street FEIS includes several improvements to the pedestrian environment within the study area. These improvements include streetscape design, wider sidewalks, and pedestrian-oriented sidewalk elements.

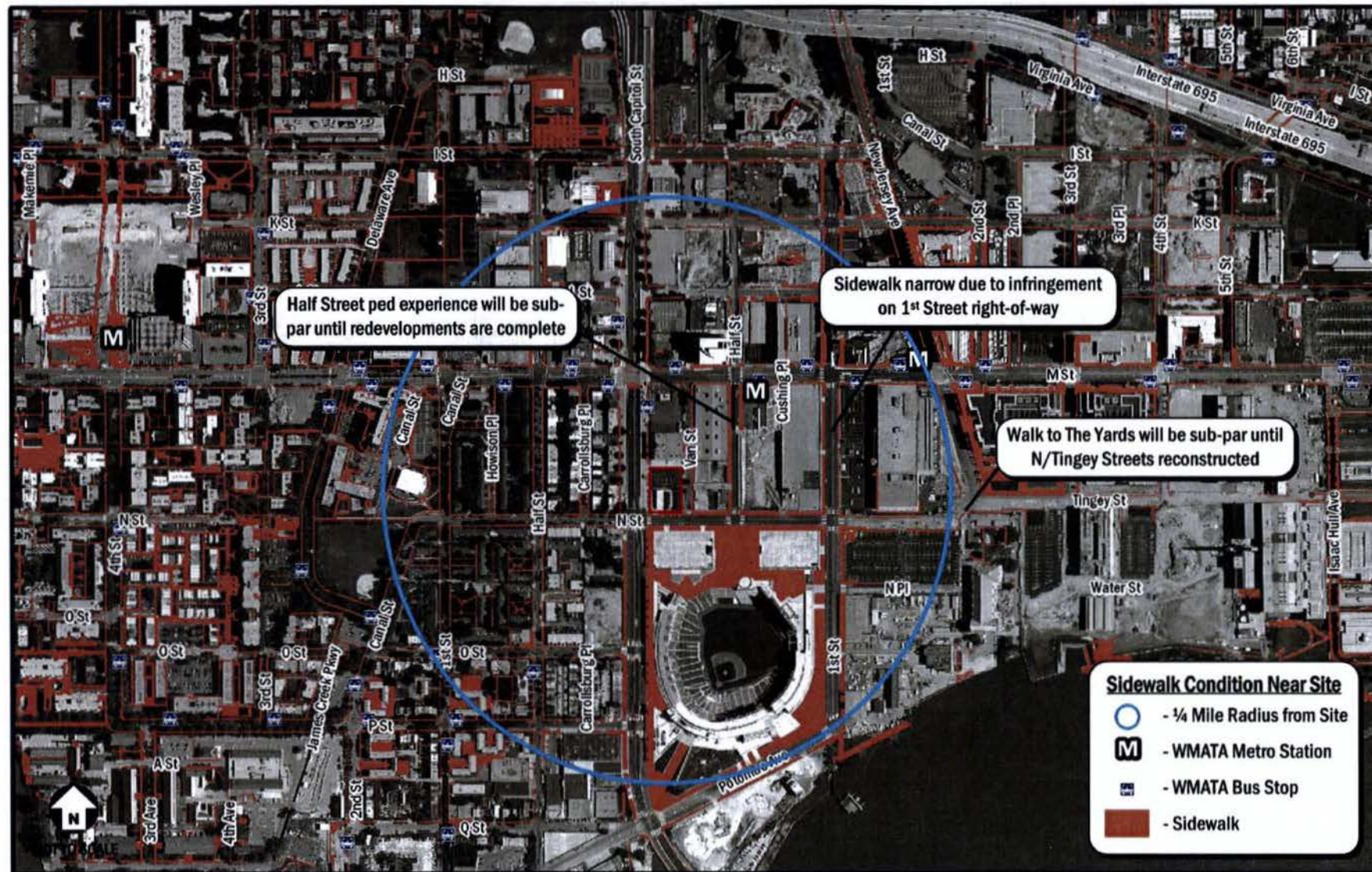


Figure 24: Sidewalk Condition Near Site

The capacity of sidewalks to handle the projected number of pedestrians will not be negatively impacted by this project, as long as future redevelopments build sidewalks to DDOT standards. DDOT requires that all sidewalks are a minimum of 6 feet wide, with sidewalks on arterial streets 8 to 10 feet wide depending on the location. The proposed widths of the sidewalks adjacent to the site property meet the District standard.

The Highway Capacity Manual (HCM) outlines methodologies for calculating capacity of sidewalks based on the sidewalk widths. According to methodologies contained in the HCM, the LOS grade on a 6 foot wide sidewalk does not reach LOS D until the sidewalk volumes reach 2,000 pedestrians per hour. Similarly, LOS E is not reached until volumes reach 3,000 pedestrians per hour. The existing pedestrian counts adjacent to the site combined with the projected pedestrian trips associated with the site will not approach these thresholds. Thus, the sidewalk capacity will not be exceeded, and there will be no detrimental impacts.

Based on the trip generation estimates for walking, the quality of the routes near the project's location taking into account the streetscapes that will be redeveloped and improved, the 1244 South Capitol St. SE development will not have a negative impact to pedestrian facilities in the study area.

Crash Analysis

This section of the report reviews available crash data within the study area, reviews potential impacts of proposed development on crash rates, and makes recommendations for mitigation measures where needed.

Summary of Available Crash Data

A safety analysis was performed to determine if there was an abnormally high accident rate at any study area intersection. The District Department of Transportation (DDOT) provided the last three years of intersection accident data; from 2011 to 2013.

This data set included all intersections within the study area. This data was reviewed and analyzed to determine the accident rate at each location. For intersections, the accident rate is measured in accidents per million-entering vehicles (MEV). The accident rates per intersection are shown in Table 20.

Table 20: Intersection Crash Rates

Intersection	Total Crashes	Ped Crashes	Bike Crashes	Rate per MEV*
Potomac Avenue & South Capitol Street	50	2	0	0.93
South Capitol Street & N Street	48	0	0	1.35
South Capitol Street & M Street	62	0	0	2.32
M Street & Van Street, SE	1	0	0	0.07
N Street & Van Street, SE	4	0	0	2.14
M Street & Half Street, SE	6	1	0	0.41
N Street & Half Street, SE	0	0	0	0.00
M Street & First Street, SE	16	2	0	0.85
N Street & First Street, SE	5	0	0	0.56
M Street & New Jersey Avenue, SE	14	0	0	0.85
M Street & Half Street, SW	18	1	0	0.85

According to the Institute of Transportation Engineer's Transportation Impact Analysis for Site Development, an accident rate of 1.0 or higher is an indication that further study is required. Three intersections in the study area meet this criterion

(as shown in red in Table 20 and detailed in Table 21). The proposed site needs to be developed in a manner to help alleviate, or at minimum not add to, the conflicts at these intersections.

The crash summary data in Table 20 shows three intersections with a crash rate over 1.0 crashes per million entering vehicles—the rate which is considered a threshold for further analysis. A rate over 1.0 does not necessarily mean there is a significant problem at an intersection, but rather it is a threshold used to identify which intersections may have higher crash rates due to operational, geometric, or other issues.

For these three intersections, the crash type information from the DDOT crash data was reviewed to see if there is a high percentage of certain crash types. Generally, the reasons for why an intersection has a high crash rate cannot be derived from crash data, as the exact details of each crash are not represented. However, some summaries of crash data can be used to develop general trends or eliminate some possible causes.

Table 21 contains a breakdown of crash types reported for the three intersections with a crash rate over 1.0 per MEV.

Table 21: Crash Type Breakdown

Intersection	Rate per MEV	Right Angle	Left Turn	Right Turn	Rear End	Side Swiped	Head On	Parked	Fixed Object	Ran Off Road	Ped. Involved	Backing	Non-Collision	Under/Over Ride	Unspecified	Total
South Capitol Street & N Street	1.35	1	3	0	33	7	0	0	0	0	0	2	0	0	2	48
		2%	6%	0%	69%	15%	0%	0%	0%	0%	0%	4%	0%	0%	4%	
South Capitol Street & M Street	2.32	12	16	1	16	12	0	0	2	0	0	2	0	0	1	62
		19%	26%	2%	26%	19%	0%	0%	3%	0%	0%	3%	0%	0%	2%	
N Street & Van Street, SE	2.14	0	1	0	0	0	0	0	1	0	0	2	0	0	0	4
		0%	25%	0%	0%	0%	0%	0%	25%	0%	0%	50%	0%	0%	0%	

Potential Impacts

This section reviews the three locations with existing crash rates over 1.0 MEV and reviews potential impacts of the proposed development.

■ South Capitol Street & N Street

This intersection is slightly over the threshold of 1.0 crashes per MEV, with a rate of approximately 1.35 crashes per MEV over the course of the 3-year study period. The majority of the crashes at this intersection were side swiped and rear end crashes. Sideswipe crashes can often occur when a vehicle going straight through an intersection makes a last-second lane change to get around a vehicle waiting for a gap to make a left turn from a shared through/left lane, as is the case in this location since this section of N Street does not have separate turning lanes at this intersection. Elevated rear-end collision rates are typical at intersections controlled by a traffic signal.

However, this report does not recommend mitigation measures at this intersection due to future changes proposed in the South Capitol Street FEIS. Additionally, the proposed development is not projected to make significant changes to the commuting patterns, operations, or geometry of this intersection.

■ South Capitol Street & M Street

This intersection is over the threshold of 1.0 crashes per MEV, with a rate of approximately 2.32 crashes per MEV. The majority of the crashes at this intersection were side swiped vehicles, turning vehicles, rear-end crashes, and

right-angle crashes Sideswipe crashes can often occur when a vehicle going straight through an intersection makes a last-second lane change to get around a vehicle waiting for a gap to make a left turn from a shared through/left lane, as is the case in this location since this section of M Street does not have separate turning lanes at this intersection in both directions Additionally, the configuration of this intersection as a grade-separated diamond intersection leads to a high concentration of turning vehicles

However, this report does not recommend mitigation measures at this intersection due to future changes proposed in the South Capitol Street FEIS Additionally, the proposed development is not projected to make significant changes to the commuting patterns, operations, or geometry of this intersection

- *N Street & Van Street, SE*

This intersection is over the threshold of 1.0 crashes per MEV, with a rate of 2.14 crashes per MEV The majority of crashes at this intersection are backing collisions, however, there are only two of these types of crashes at this intersection over the course of the three year study period, with only four crashes total The elevated crash rate is more likely generated by the low volume at the intersection Overall, the distribution of crash types at the intersection does not lead to a likely safety issue at the intersection

Additionally, the backing maneuvers may be occurring in part to traffic patterns generated on the existing site The reduction of curb cuts and consolidation of access provided due the development of 1244 South Capitol St. SE may have a positive impact at crash rates at this intersection

This report does not recommend mitigation measures at this intersection as the proposed development is not projected to make changes to the commuting patterns, operations, or geometry of this intersection that could negatively influence safety

Leading Pedestrian Intervals

The proposed 1244 South Capitol St. SE development will not have a significant effect on many of these intersections, as it will not directly influence commuter traffic patterns or change operations and geometry at most intersections However, the changes introduced by the proposed development will have a significant impact on pedestrian crossings of South Capitol Street and M Street

As the crash data shows pedestrian crashes at a few of intersections along M Street, this report recommends that DDOT consider adding Leading Pedestrian Intervals (LPI) to the signalized intersections within the study area

LPIs are a signal-timing-based pedestrian safety measure Intersections with pedestrian and car traffic often experience conflict between these two groups, with potentially dangerous consequences for the pedestrians. The term LPI refers to when the 'Walk' signal appears approximately three or four seconds before the green traffic signal for vehicles The 'Walk' signal then remains active for the duration of the green signal This brief timing adjustment allows pedestrians more time to cross the street and increases their visibility to drivers, especially those making turns